WEITRON

B0530WS

Surface Mount Schottky Barrier Rectifier

Lead(Pb)-Free

SMALL SIGNAL
SCHOTTKY DIODES
500m AMPERES
30 VOLTS

Features:

* Low Forward Voltage Drop.
* Guard Ring Construction for Transient Protection.
* High Conductance.

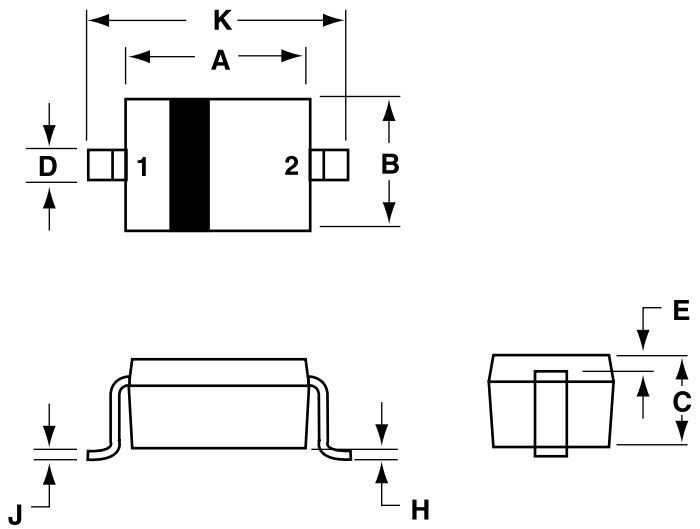
SOD-323

Description:

* Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0.
* Moisture Sensitivity: Level 1 per J-STD-020C.
* Terminals: Solderable per MIL-STD-202, Method 208.
* Polarity: Cathode Band.
* Marking: SE
* Weight: 0.004 grams (approximate).

SOD-323 Outline Demensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15 REF	
H	0.00	0.10
J	0.089	0.177
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings @ T_A= 25°C Unless otherwise specified
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Values	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	2	A
Power Dissipation (Note 1)	P_d	235	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	426	°C/W
Operating Temperature Range	T_J	+125	°C
Storage Temperature Range	T_{STG}	-40 to +125	°C

Electrical Characteristics @ T_A= 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 2)	I_R = 500μA	$V_{(BR)R}$	30	-	-	V
Forward Voltage Drop (Note 2)	I_F= 0.1A I_F= 0.5A	V_F	-	- 0.40	0.36 0.45	V
Leakage Current (Note 2)	V_R = 15V V_R = 20V V_R = 30V	I_R	-	-	80 100 500	μA
Junction Capacitance	f = 1MHz, V_R= 0V	C_T	-	58	-	pF

Note:1. Part mounted on FR-4 PC board with recommended pad layout.
2. Short duration test pulse used to minimize self-heating effect.
3. No purposefully added lead.

Electrical characteristic curves (T_A=25°C)

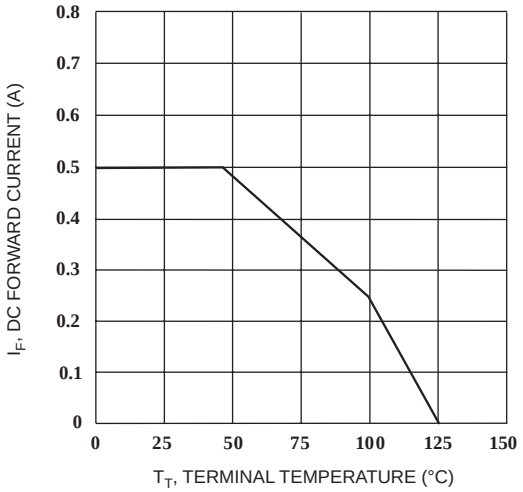


FIG.1 FORWARD CURRENT DERATING CURVE

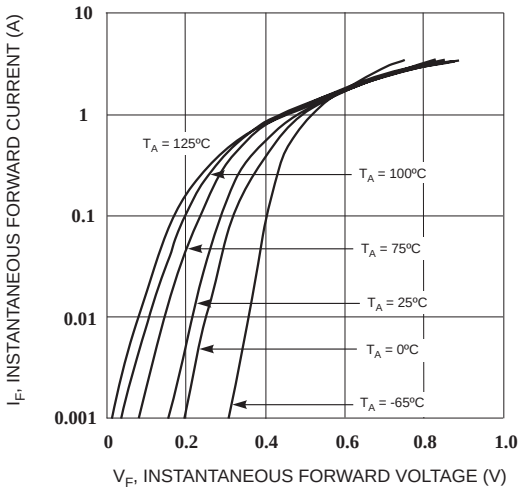


FIG.2 TYPICAL FORWARD CHARACTERISTICS

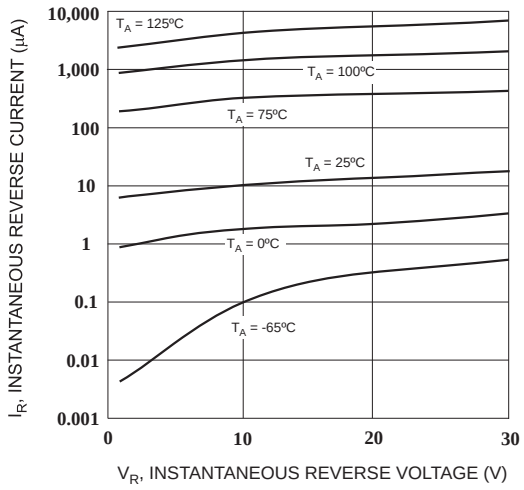


FIG.3 TYPICAL REVERSE CHARACTERISTICS

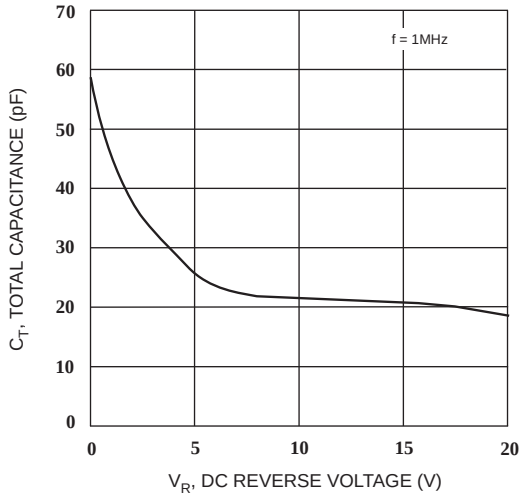


FIG.4 TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

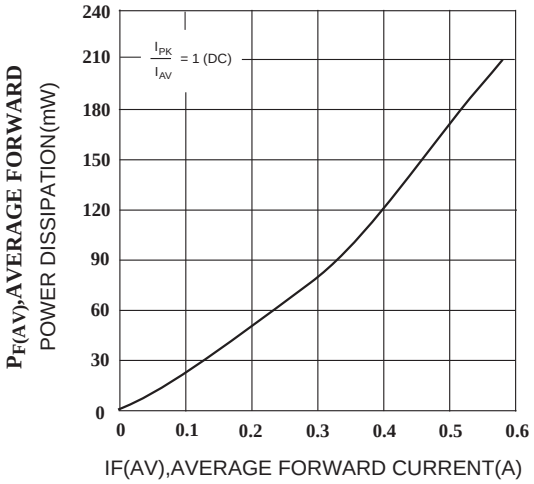


FIG.5 FORWARD POWER DISSIPATION